

REMARKS

Claims 1-6, 9-12, 15-18, 28-31 are pending in the application.

Claims 1-6, 9-12, 15-18, 28-31 were rejected.

Claims 1, 9, 15 and 28 are amended herein.

I. Double Patenting Rejection

Claims 1-6, 9-12, 15-18, 28-31 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,169,738 (the parent to the present application). The Office Action notes that such a rejection may be overcome by the filing of a terminal disclaimer provided the conflicting patent is commonly owned with this application. To that end, Applicants present a terminal disclaimer in Attachment I hereto that is believed to satisfy that condition. In view of the filing of such terminal disclaimer, Applicants respectfully request the withdrawal of this double patenting rejection of their claims.

II 35 USC §103 Claim Rejections

In the Office Action, independent claims 1, 9, 15 and 28 were rejected under 35 USC §103(a) as being unpatentable over Hayano *et al.* (U.S. Patent No. 5,132,966) in view of Key *et al.* (U.S. Patent No. 5,991,272) and further in view of Bruno *et al.* (U.S. Patent No. 5,894,475), and, for claims 15 and 28, further in view of Kawase *et al.* (U.S. Patent No. 5,774,455). Applicants respectfully traverse those rejections and request reconsideration by the Examiner.

The invention here provides a dynamic call admission methodology that operates at an ATM network edge, and is particularly useful for applications invoking ATM Adaptation Layer Type 2 (AAL2). The dynamic call admission methodology of the invention uniquely

makes an admission decision as a function of call type – in particular, that methodology takes into consideration different bandwidth needs for different call types. A key feature of the invention is a recognition that different call types transmitted over a voice circuit have substantially different bandwidth requirements and vary widely in the applicability of statistical multiplexing for a given call type. In the exemplary embodiment described for the invention, call admission is dynamically adapted depending on whether a call using a voice circuit is actually a voice signal, a facsimile signal, or a data signal modulated onto a voice carrier by a modem. A particular feature of the invention is the determination of bandwidth available for admission of voice calls as a function of the number of non-voice calls admitted.

While the primary reference, Hayano, makes note of call admission to its system being carried out according to methods known in the art, the thrust of its teaching is directed to the treatment of calls already admitted – *i.e.*, to the transmission priority to be granted for calls of different categories. Moreover, unlike the call admission methodology disclosed and claimed by the inventors, the methodology of Hayano essential treats voice-channel traffic – to which Applicants methodology is substantially directed -- as a stepchild, receiving no priority and being allocated bandwidth only insofar as total bandwidth is not required for carrying traffic to which Hayano assigns a higher priority. Thus, Applicants submit, Hayano fails both as a teaching of asserted elements of their claimed invention, and additionally as not being analogous art to that of the invention.

Even if Hayano were accepted as teaching all that is asserted by the Office Action, it is clear, as acknowledged by the Office Action, that it does not teach or suggest the limitations of Applicants' claims respecting (1) "determining an amount of bandwidth available for voice as a function of a number of non-voice admitted calls" and (2) "updating a count of a number of voice calls currently admitted, when the admitted incoming call is a voice call." To address

this deficiency as to the first cited limitation, the Office Action relies on Key as teaching this limitation along with the assertion that it would have been obvious to one skilled in the art to combine that asserted teaching of Key with Hayano to replicate the claimed invention. Applicants respectfully suggest that such an interpretation of Key is not supportable.

While Key is generally directed to call admission in a network, Applicant does not believe that a fair reading of Key's disclosure supports a construction from the limitation in question could be derived. Indeed, the specific portion of Key cited by the Office Action in support of the rejection basis here (Figure 7 and the explanation of that figure in the specification) is simply a series of curves defining an admissions boundary for voice calls, at one extreme and video data at the other extreme for different conditions of network loading and QoS requirements. Applicants respectfully submit that nothing in the cited figure or the textual explanation thereof could reasonably be construed to show or suggest the feature of Applicants' claimed invention whereby the amount of bandwidth made available for voice calls is determined as a function of a number of non-voice admitted calls.

To address the deficiency in Hayano's teaching as to the second cited limitation above, the Office Action relies on Bruno as teaching this limitation along with the assertion that it would have been obvious to one skilled in the art to combine that asserted teaching of Bruno with Hayano and Key to replicate the claimed invention. Applicants submit that such a combinatorial analysis cannot reasonably be supported.

In the first place, it is far from clear that Bruno actually teaches the limitation in question. The portion of the Bruno reference referred to in the Office Action as support for the position refers to a signaling system, and more particularly to the actions taken by the signaling system in respect to the completion of a call which had been set up through the operation of the

signaling system. Plainly, that action on the part of the Bruno system has absolutely nothing to do with call admission. The more critical point, however, is that Bruno is simply not analogous art to the art of the invention. The only point at which there is even remote similarity between the art of Bruno and that of the invention is that both are practiced in the realm of ATM technology. But the thrust of the Bruno teaching is a method for interfacing a billing system established in respect to calls handled via a traditional POTS network with a network in which at least some of the long haul transmission is implemented using ATM technology. Accordingly, Applicant respectfully submits that Bruno does not teach the limitation in question, and even if it did, the reference is not analogous art to the invention here and therefore cannot stand as an appropriate §103 reference against Applicants' claims.

Importantly, Applicants' invention includes an additional feature whereby a threshold parameter for "block dropping" in the presence of congestion is varied as a function of the available voice bandwidth. No such feature is taught, or even suggested by the cited references. Each of Applicants' independent claims has been amended to incorporate a limitation directed to this feature of the invention.

It bears particular emphasis that the variation in the threshold parameter values according to the invention is a function of *only* the bandwidth available for voice calls -- *i.e.*, total bandwidth available on the virtual circuit minus the bandwidth allocated to non-voice calls admitted to the virtual circuit. This is an important distinction. As Applicants explained in the written description of their invention, the value of the queue-fill parameter of the block-dropping algorithms of the art pertain only to the number of voice-call packets waiting in the buffer for transmission. However, as Applicants also noted in their written description, voice-call packets are queued together with non-voice-call packets in the buffer. Thus the amount of buffer capacity available for voice-call packets varies depending on the number of non-voice-

call packets in the buffer, which is expected to be proportional to the virtual circuit bandwidth assigned to non-voice calls. By adapting the block-dropping threshold values for the buffer as a function of the bandwidth available for voice calls, the invention achieves an improved utilization of buffer capacity, and less likelihood of buffer overflow, than that of the prior art.

Finally, Applicants reassert their position from the prior Office-Action response that the approach of the Office Action here amounts to a finding a collection of isolated elements in disparate prior art references that collectively comprise all of the elements of the claimed invention -- constituting the prohibited “hindsight” rejection analysis. Applicants’ argument in support of that position is not repeated here, but is incorporated by reference from that prior response.

As amended herein, Applicants submit that their independent claims are patentably distinct from the art of record herein. Withdrawal of the §103 rejection of independent claims 1, 9, 15 and 28 is accordingly respectfully requested.

III. 35 U.S.C. §103 Dependent Claim Rejections

Dependent claims 2-6, 10-12, 16-18 and 29-31 were rejected under 35 U.S.C. §103 as being unpatentable over the combination of Hayano, Key and Bruno applied against independent claims 1, 9, 15 and 28 and at least one of three additional cited secondary references. All of these rejected claims depend, either directly or indirectly, from one of independent claims 1, 9, 15 or 28, which have been shown above to be patentable over the Hayano/Key/Bruno combination. Accordingly, those dependent claims must also be patentable. Withdrawal of the §103 rejection of dependent claims 2-6, 10-12, 16-18 and 29-31 is accordingly respectfully requested.

IV. Conclusion

Having fully addressed the Examiner's rejection bases herein, it is believed that, in view of the preceding amendments and remarks, this application now stands in condition for allowance. Such allowance is respectfully requested.

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Please charge any fees due in respect to this amendment to Deposit Account No. 50-1944.

Respectfully submitted,



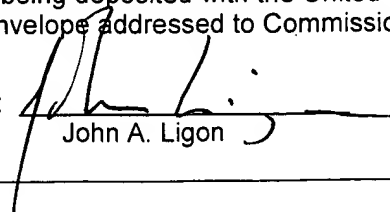
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I hereby certify that this Response to Final Office Action is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on May 8, 2006.

By:



John A. Ligon